

CLAIMS

I CLAIM:

1. ~~In an identification wristband for emitting a~~  
radio frequency identification signal, the combination of:

5 a first flexible polymer lamina;

a second flexible polymer lamina;

programmable encoder circuitry encapsulated  
between said laminae for defining identification  
information;

10 an antenna encapsulated between said laminae;

and

a signal generator circuitry encapsulated by  
said laminae and responsive to said encoder  
circuitry for applying a radio frequency signal  
15 bearing said identification information to said  
antenna.

2. The identification wristband of claim 1  
wherein said circuitry is embodied in an IC chip  
encapsulated between said first and second laminae.

20 3. ~~The identification wristband of claim 1~~  
wherein said circuitry is formed of polymer materials  
deposited on one of said laminae.

4. The wristband of claim 1 including a third  
intermediate lamina located between said first and second  
25 laminae, said intermediate lamina having said circuitry

~~deposited thereupon in conjunction with said antenna and  
encapsulated between said first and second laminae.~~

5        5.    The identification wristband of claim 1  
         wherein said circuitry is embodied in an IC chip deposited  
         on an intermediate third lamina and encapsulated between  
         said first and second laminae.

6.    The identification wristband of claim 5  
         wherein said circuitry is formed of polymeric materials  
         deposited on said third intermediate lamina.

10       7.    In a system for providing identification  
         information, the combination of:

         a reader for emitting an electromagnetic  
         signal;

15       an identification wristband responsive to  
         said electromagnetic signal by producing an  
         identification signal, said wristband including:

         a first lamina of polymeric  
         material;

20       a second lamina of polymeric  
         material secured to said first lamina;

         an antenna for receiving said  
         electromagnetic signal located between  
         said laminae; and

25       circuitry between said laminae  
         coupled to said antenna for generating  
         ~~said identification signal in response~~

*Sub  
A4*

~~to said electromagnetic signal received~~  
by said antenna, and said reader being  
responsive to said identification  
signal.

5           8.    The identification wristband of claim 7  
wherein portions of said circuitry are defined by a  
conductive ink pattern disposed on one of said laminae.

9.    The identification wristband of claim 7  
wherein said circuitry is defined by polymeric conductive  
10 ~~patterns on one of said laminae.~~

*9*  
10.   In an information transmitting and receiving  
system, the combination of:

          a reader for emitting an electromagnetic  
signal;

15           an identification wristband for receiving  
said electromagnetic signal and producing a  
responsive identification signal, said wristband  
including:

          a first polymeric material lamina;

20           a second polymeric material lamina;

and

          a third intermediate polymeric  
material lamina interposed between said  
first and second laminae, said first,  
25           second, and third laminae being secured  
to one another;

an antenna for receiving said  
electromagnetic signal included between  
two of said laminae;

circuitry between said laminae  
coupled to said antenna for generating  
said identification signal in response  
to said electromagnetic signal received  
by said antenna; and

said reader being responsive to  
said identification signal.

10 <sup>10</sup>11. The identification wristband of claim <sup>9</sup>10  
wherein portions of said circuitry are defined by a  
conductive ink pattern deposited on said third intermediate  
lamina.

15 <sup>11</sup>12. The identification wristband of claim <sup>9</sup>10  
wherein portions of said circuitry are defined by polymeric  
conductors on said third intermediate lamina.

20 ~~13. In a method of fabricating a wristband for~~  
producing a radio frequency identification signal, the steps  
of:

dispensing a continuous first lamina of  
polymeric material;

depositing an RFID circuit on said first  
lamina;

25 depositing an antenna on said first lamina  
~~connected to said RFID circuit;~~

*Sub A5*  
~~depositing a second polymeric lamina over  
said RFID circuit and securing it to said first  
lamina and encapsulating said RFID circuit and  
said antenna between said first and second  
laminae.~~

5

<sup>13</sup>  
<sup>12</sup>  
14. The method of claim <sup>13</sup> in which said RFID  
circuit is provided by conductive ink on said first lamina.

<sup>14</sup>  
<sup>12</sup>  
15. The method of claim <sup>13</sup> wherein said RFID  
circuit is provided by polymeric conductor means on said  
10 first lamina.

<sup>15</sup>  
16. The method of forming an identification  
wristband for producing a radio frequency identification  
signal, said method including the steps of:

dispensing an intermediate polymeric lamina;

15 depositing an RFID circuit including an  
antenna on said intermediate lamina;

securing a top polymeric lamina to said  
intermediate lamina in overlying relationship with  
said RFID circuit; and

20 securing a bottom polymeric lamina in  
underlying relationship with said intermediate  
lamina to encapsulate said intermediate lamina,  
and forming the configuration of said wristband on  
said laminae to permit the separation of said  
25 wristband therefrom.